



TIPSY TWO-SEATER
62 h.p. Walter Mikron II.

Span...	31ft. 2in.
Length...	22ft.
All-up weight...	1,074 lb.
Weight empty...	618 lb.
Maximum speed...	110 m.p.h.
Cruising speed (2,000 r.p.m.)...	100 m.p.h.
Stalling speed...	37 m.p.h.
Rate of climb...	650 ft./min.
Range at cruising speed (12-gall. tank)...	350 miles
Price...	£675

Makers: Topsy Aircraft Co. Ltd., London Air Park, Hanworth, Mddx.
Distributors: (South) Brian Allen Aviation Ltd., Croydon Airport.
(North) Wards Aircraft, Liverpool Airport.

Equipment of the Topsy and its Walter Mikron engine includes instruments by Smiths, Scintilla magnetos, K.L.G. plugs, Dunlop wheels and tyres, tanks by R. Malcolm, Ltd., and metal fittings by R. Malcolm, Ltd., and E. D. Abbott, Ltd.

way, even during the take-off, when a slight swing must be corrected, and is probably a good thing from the novice's point of view. What rudder movement there is is light and virile.

Earlier, while speaking of the elevator limitation, I mentioned one of the reasons for this as being concerned with the prevention of a really violent stall. Here, too, the small area of the flaps is an important point. Though the arrival of the stall with the flaps either up or down is

Another Navigational Extension

ELSEWHERE in this issue, in an article describing the new navigation school at Shoreham, it is mentioned that Air Service Training will also be assisting Manston in this work. Recently A.S.T. purchased two Avro 652s—the civil prototype of the Anson—from Imperial Airways and converted them for use as flying classrooms. Each will be flown by an ex-airline pilot with a radio operator, and will carry a navigation instructor and his students. Additionally, the machines will be used by those civilians taking the Long Commercial Course at the School.

Two new instructors have been engaged at Ansty—F/O. A. J. S. Morris, who is taking Vice Cdr. Cooper's place as chief ground instructor, and F/O. J. H. H. Hill.

A New Company

RECENTLY registered under the title of White Allom Aircraft, Ltd., a new company is a subsidiary of White Allom, Ltd., a well-known firm of decorators and furnishers, with offices at 15, St. George Street, Hanover Square, London, W.1.

One of the directors of the latter, Capt. S. Spreat, was associated during the war with Mr. M. H. Volk (now of Brighton-Hove-Shoreham Airport fame) in the building of flying boats. Mr. Volk has been invited to join the Board of the new company as technical director in an advisory capacity. There is a large and well-equipped factory, and Mr. Volk states that they are now ready to consider aviation propositions requiring development.

very prolonged, it is, when it does arrive, quite sudden. It is difficult always, during slow flying experiments, to be quite sure that the rudder is central, but it seemed that the Topsy tended to drop its right wing rather than its left. The nose, too, dropped fairly quickly, though at a safe altitude it is difficult to judge the amount of height which is lost during this final spasm of the stall. Probably very little, and control is, in any case, regained immediately. Nevertheless, this characteristic provides the only possible source of danger with the machine for the early soloist. It may be impossible to imagine anyone stretching a glide to the point of reducing the air speed to 35 m.p.h. or less, but such things have been known. Up to the very point of the stall there is ample control in all axes, and the airflow silence, coupled with a somewhat lumpy tick-over of the engine, would tell anyone but a complete moron that the end was near.

This number one production machine has parachute-type seats, and for that reason I was wearing a parachute. Upholstery, as such, was non-existent, and a somewhat solid pack is not always the most comfortable of cushions. Presumably the machine will be produced with the normal type of seat with a backrest which provides rather more natural support. As it was, a couple of hours of continuous flying was quite as much as one could comfortably endure.

Contrary to previous experience with the kind of instruments which are fitted to little aeroplanes, those in the Topsy worked well. The vertical-reading dashboard-fitted compass of Czechoslovakian design produced results, but the majority of pilots in this country prefer the verge-riding pattern, and production machines will have the more normal compass mounted just below the board. The place in this board at present taken by the compass will, when necessary, be used for the fitting of a turn-indicator which now forms an essential item of equipment for modern flying training.

Although the company is not, apparently, particularly pleased with the finish of this first machine, and say that later models will be much better in this respect, this was, even so, a great deal better than that normally found on light aeroplanes. This finish is obtained by using a series of coats, with a rub-down between each, and a final surface of lacquer, but it is also helped considerably by the way in which the fabric is put on.

The structure is quite straightforward, with a particularly robust box-type main spar and ply leading edge, and with a conventional box fuselage, the top shape of which is obtained by means of half-hoops and stringers on which the fabric is laid. The undercarriage consists of two cantilever legs, with six inches of movement, which are firmly attached to the main spar. H. A. T.

Wallington's Aeronautical Library

A LIST of some hundreds of aviation books which are available to residents in the Wallington district has been issued by the Wallington public library. It includes a very comprehensive list of practical and technical works which would be of great use to ground engineers and students and of interest to amateurs.

Aero-Engine Lubrication

AN informative little book has just been published for those who are interested (in a not too technical way) in the problems which beset the designer of a modern aero engine. Its title is *Aero Engines and Their Lubrication*, and it deals in an admirable manner with the history of the aero engine from the earliest days to the latest types now in use. It shows the reader the various problems that have arisen as the efficiency of engines has increased. The terminology is simple, but, to ensure that the reader may fully understand, a glossary of terms is included.

The author goes on to explain the important part played by correct lubrication in the different types of engine developed, and closes with a chapter on engine control and a final word on operational costs. Throughout, the book is well illustrated and includes a coloured trilingual lubrication chart for the Rolls-Royce Kestrel engine. *Aero Engines and Their Lubrication* is obtainable from the publishers, C. C. Wakefield and Co., Ltd., Wakefield House, Cheapside, London, E.C.2, price 2s.